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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,359	07/17/2003	Kyoung-Su Ha	8733.526.10-US	8941
7590	11/03/2004		EXAMINER	
MCKENNA LONG & ALDRIDGE LLP			TON, MINH TOAN T	
Song K. Jung			ART UNIT	PAPER NUMBER
1900 K Street, N.W.			2871	
Washington, DC 20006				

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/620,359	HA ET AL.	
	Examiner	Art Unit	
	Toan Ton	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 36-44 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 36-44 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

Claim Rejections - 35 USC § 112

1. Claims 36-44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36, line 4, "the transparent substrate" lacks antecedent basis.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 36, 38 and 43-44 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant's Prior Art (APA hereinafter, see at least Figures 3-4D).

APA discloses a conventional transfective LCD device comprising: a transparent substrate 21; at least one gate line 25 and at least one gate electrode 32 (materials such as Al, AlNd) formed on the transparent substrate; a gate insulating layer 43 formed over the at least gate line and the at least gate electrode; a silicon layer formed on the gate insulating layer, the silicon layer positioned above the at least one gate electrode; a source electrode 33 and a drain electrode 35 formed on the silicon layer and spaced apart from each other with the silicon layer overlapped therebetween; at least one data line 27; a first passivation layer 51 covering the at least one data line; a transparent electrode 19a formed on the first passivation layer; a reflective

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electrode 19b formed on the transparent electrode; a second passivation layer 69 formed between the transparent electrode and the reflective electrode.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 37, 39-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over APA as applied to claims 36, 38, 43-44 above, and further in view of Chung et al (US 2002/0109797).

The limitations not disclosed by APA are the reflective electrode having a double-layered structure.

Chung discloses lower MoW and the upper AlNd layers forming double layered reflection plates, i.e., double layered pixel electrodes, wherein such multi-layered structure yields advantages such as strong resistant against oxidation and maintaining high reflectance and conductivity. Therefore, it would have been obvious to one of ordinary skill in the art to employ a multi-layered structure for the reflective electrode (comprising at least Mo, Al, AlNd) for achieving advantages such as strong resistant against oxidation and maintaining high reflectance and conductivity.

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

November 1, 2004


TOANTON
PRIMARY EXAMINER